

C-745-G Cylinder Storage Yard

The C-745-G cylinder storage yard is located within the southeast quadrant of the plant immediately south of the C-333 Process Building. The C-745-G cylinder storage yard borders Michigan Avenue on the north, 15th Street on the east, Arizona Avenue on the south, and 14th Street on the west. Access to the yard is primarily available from the south and west sides of the yard as well as a service drive which is located in the middle of the yard. The cylinder yard was reconstructed from a gravel yard in 1996 and now consists of approximately 371,000 square feet of concrete surface with 12 inch thickness. The yard is divided into approximately 4 sections separated by two trench drains and a service road that runs from north to south. Cylinders are stacked in three sections with rows in each section running south to north with cylinder positions running west to east. The concrete surface of each section is sloped to gravity drain storm water into trench drains which empty the water into a large storm water basin (see Fig. 5) located in the northwest section of the



Figure 5. C-745-G Basin.

yard. The storm water basin is approximately 75 feet wide and approximately 180 feet in length on the south side and 155 feet in length on its north side. The storm water basin is approximately 16 feet deep on its low side and 15 feet deep on its high side. The basin has a capacity of approximately 1.5 million gallons of water. Storm water is fed into the basin by a 36 inch storm drainage pipe on the south side and a 30 inch storm draining pipe on the east side. The basin's lift station consists of two pumps (a lead and a backup) for water removal. Each pump has the capacity of pumping 1,940 gallons per minute at a head pressure of 45.8 feet. Each pump has a 40 horsepower motor running at 1,150 rpm. The motor operates on 480 volts. The pumps discharge through a 14-inch pipe which runs due west past the Plant security fence and discharges into DOE's KPDES Outfall 017. The C-745-G basin pump house is shown in Fig. 6.

Located within the C-745-G cylinder storage yard is the C-746-R Waste Organic Storage Area. The C-746-R waste storage area is located in the northwest section of the cylinder storage yard south of the storm water basin. The waste storage area consist of approximately 2,100 square feet diked uncovered concrete storage pad containing three nickel plated steel tanks (one 8,000 gallon and two

4,500 gallon). In 1998/1999 a RCRA clean closure of the C-746-R Hazardous Waste Storage Area was completed.



Figure 6. C-745-G Basin Pump House.

There are four metal buildings (each building is 50 feet wide by 90 feet in length by 22 feet in height) located on the western side of C-745-G. The buildings are designated C-745-G2, G3, G4, and G5, beginning with the northern most structure. These buildings are used to provide a controlled environment for painting cylinders.

The electrical systems serving the cylinder yard include an electrical substation, power panel distribution, security lighting, and power and controls for the lift station. The electrical substation is located at the northwest corner of the cylinder storage yard and includes a 15kV primary disconnect switch. It is a 150kVA, 13.8kV/480V pad-mount, dry-type, 3-phase transformer fed from a 13.8 kV feeder adjacent to the yard. The 13.8 kV feeder is the primary feeder for the area south of the C-333 Process Building. The feeder originates from the C-531-1 switch house. The 13.8kV feeder runs aerial via pole then underground to the G-yard substation, and continues underground along the north side of the cylinder storage yard. The 480V power panel adjacent to the substation distributes power to the yard lighting and 200Amp, 3-phase power to the cylinder yard lift station at the northwest area of the yard. Other utilities in the cylinder yard include extensions of power service to other adjacent cylinder yards, and duct continuance at the southwest corner, and an overhead continuance running along the south side of the yard.